

What is claimed is:

- 1 1. A method for retrieving data from a database corresponding to a search term
2 comprising:
3 organizing the data, based on relationships among the data, into a network including at
4 least one predecessor group and a plurality of descendant groups;
5 locating an occurrence of the search term in one of said plurality of descendant groups;
6 traversing said network from said occurrence in said one of said plurality of descendant
7 groups to related data in said at least one predecessor group using said relationships among the
8 data; and
9 building a context including said occurrence and said related data thereby retrieving data
10 from the database corresponding to the search term.
- 1 2. The method of claim 1, wherein said organizing the data into a network comprises
2 organizing the data into a hierarchy.
- 1 3. The method of claim 2, wherein said organizing the data into a hierarchy
2 comprises organizing the data into a hierarchy having a plurality of levels including a first level
3 associated with said at least one predecessor group and a second level associated with at least a
4 portion of said plurality of descendant groups, said first level being higher than said second level
5 in said hierarchy.
- 1 4. The method of claim 2, wherein said traversing said network comprises upwardly
2 traversing said hierarchy from said occurrence in said one of said plurality of descendant groups
3 to related data in said at least one predecessor group using said relationships among the data.
- 1 5. The method of claim 4, further comprising downwardly traversing said hierarchy
2 from said related data in said at least one predecessor group to second related data in said
3 plurality of descendant groups using said relationships among the data.

1 6. The method of claim 5, wherein said building a context comprises building a
2 context including said occurrence, said related data, and said second related data thereby
3 retrieving data from the database corresponding to the search term.

1 7. The method of claim 4, further comprising downwardly and exhaustively
2 traversing said hierarchy from said related data in said at least one predecessor group to a
3 plurality of second related data in said plurality of descendant groups using said relationships
4 among the data.

1 8. The method of claim 7, wherein said building a context comprises building a
2 context including said occurrence, said related data, and said plurality of second related data
3 thereby retrieving data from the database corresponding to the search term.

1 9. The method of claim 1, further comprising exhaustively traversing said network
2 from said related data in said at least one predecessor group to a plurality of second related data
3 in said plurality of descendant groups using said relationships among the data.

1 10. The method of claim 9, wherein said building a context comprises building a
2 context including said occurrence, said related data, and said plurality of second related data
3 thereby retrieving data from the database corresponding to the search term.

1 11. The method of claim 1, further comprises storing said context as a subset of the
2 database.

1 12. The method of claim 1, wherein said organizing the data, based on relationships
2 among the data, into a network comprises forming a relational table indicative of relationships
3 between instances of said at least one predecessor group and instances of a first one of said
4 plurality of descendant groups.

1 13. The method of claim 12, wherein said forming a relational table comprises
2 forming a many-to-many transfer file indicative of relationships between said instances of said at

3 least one predecessor group and said instances of said first one of said plurality of descendant
4 groups.

1 14. The method of claim 13, wherein said forming a many-to-many transfer file
2 comprises forming a many-to-many forward transfer file indicative of relationships from said
3 instances of said at least one predecessor group to said instances of said first one of said plurality
4 of descendant groups.

1 15. The method of claim 13, wherein said forming a many-to-many transfer file
2 comprises forming a many-to-many reverse transfer file indicative of relationships from said
3 instances of said first one of said plurality of descendant groups to said instances of said at least
4 one predecessor group.

1 16. The method of claim 1, wherein said organizing the data, based on relationships
2 among the data, into a network further comprises forming a relational table indicative of
3 relationships between instances of a first one of said plurality of descendant groups and a second
4 one of said plurality of descendant groups.

1 17. The method of claim 16, wherein said forming a relational table comprises
2 forming a many-to-many transfer file indicative of relationships between said instances of said
3 first one of said plurality of descendant groups and said instances of said second one of said
4 plurality of descendant groups.

1 18. The method of claim 17, wherein said forming a many-to-many transfer file
2 comprises forming a many-to-many forward transfer file indicative of relationships from said
3 instances of said first one of said plurality of descendant groups to said instances of said second
4 one of said plurality of descendant groups.

1 19. The method of claim 17, wherein said forming a many-to-many transfer file
2 comprises forming a many-to-many reverse transfer file indicative of relationships from said

3 instances of said second one of said plurality of descendant groups to said instances of said first
4 one of said plurality of descendant groups.

1 20. The method of claim 1, further comprising converting the data to a numeric
2 format in an appropriate number system.

1 21. A context of a database comprising:
2 an occurrence of data located in the database corresponding to a search term;
3 an instance of a first group related to said occurrence, wherein said first group includes
4 data corresponding to at least one data field located in the database; and
5 at least one instance of at least one second group related to said instance of said first
6 group, wherein said at least one second group includes data corresponding to at least one other
7 data field located in the database.

1 22. A context of a database comprising:
2 an occurrence of data located in the database corresponding to a search term;
3 an instance of a predecessor group related to said occurrence, wherein said predecessor
4 group includes data corresponding to at least one data field located in the database; and
5 at least one instance of at least one descendant group related to said instance of said
6 predecessor group, wherein said at least one descendant group includes data corresponding to at
7 least one other data field located in the database.

1 23. The context of claim 22, further comprising at least one instance of at least one
2 further descendant group related to said at least one instance of said at least one descendant
3 group, wherein said at least one further descendant group includes data corresponding to at least
4 a second other data field located in the database.

1 24. The context of claim 22, wherein said predecessor group is a parent group.

1 25. The context of claim 24, wherein said instance of said parent group is directly
2 related to said occurrence.

1 26. The context of claim 24, wherein said instance of said parent group is indirectly
2 related to said occurrence through at least one other group.

1 27. A method for retrieving information from a database comprising:
2 locating an occurrence of a search term in a data field of the database;
3 identifying first data directly related to said occurrence; and
4 identifying second data indirectly related to said occurrence and directly related to said
5 first data.

1 28. A method for retrieving information from a database organized in a hierarchy
2 having a parent, a first plurality of descendants each having a direct relationship to the parent,
3 and a second plurality of descendants each having an indirect relationship to the parent through
4 at least one of the first plurality of descendants, at least some of the second plurality of
5 descendants having a direct relationship to the first plurality of descendants, the method
6 comprising:
7 locating an occurrence of a search term in either said first plurality of descendants or said
8 second plurality of descendants;
9 traversing the hierarchy from said occurrence to an instance of the parent using at least
10 one of the direct relationship and the indirect relationship;
11 traversing the hierarchy from said instance of the parent to an instance of one of the first
12 plurality of descendants using the direct relationship;
13 traversing the hierarchy from said instance of one of the first plurality of descendants to
14 an instance of one of the at least some of the second plurality of descendants using the direct
15 relationship therebetween; and
16 building a context corresponding to said occurrence, said instance of the parent, said
17 instance of one of the first plurality of descendants, and said instance of one of the at least some
18 of the second plurality of descendants.

1 29. The method of claim 28, wherein said traversing the hierarchy from said instance
2 of the parent to an instance of one of the first plurality of descendants comprises exhaustively

3 traversing the hierarchy from said instance of the parent to each instance of the first plurality of
4 descendants directly related to thereto.

1 30. The method of claim 29, wherein said building a context comprises building a
2 context corresponding to said occurrence, said instance of the parent, each instance of one of the
3 first plurality of descendants, and said instance of one of the at least some of the second plurality
4 of descendants.

1 31. The method of claim 28, wherein said traversing the hierarchy from said instance
2 of one of the first plurality of descendants to an instance of one of the at least some of the second
3 plurality of descendants comprises exhaustively traversing the hierarchy from said instance of
4 one of the first plurality of descendants to each instance of the at least some of the second
5 plurality of descendants directly related to thereto.

1 32. The method of claim 31, wherein said building a context comprises building a
2 context corresponding to said occurrence, said instance of the parent, said instance of one of the
3 first plurality of descendants, and each instance of one of the at least some of the second plurality
4 of descendants.

1 33. The method of claim 28, wherein said traversing the hierarchy from said instance
2 of the parent to an instance of one of the first plurality of descendants comprises exhaustively
3 traversing the hierarchy from said instance of the parent to each instance of the first plurality of
4 descendants directly related to thereto; and

5 wherein said traversing the hierarchy from said instance of one of the first plurality of
6 descendants to an instance of one of the at least some of the second plurality of descendants
7 comprises exhaustively traversing the hierarchy from each instance of one of the first plurality of
8 descendants to each instance of the at least some of the second plurality of descendants directly
9 related to thereto.

1 34. The method of claim 33, wherein said building a context comprises building a
2 context corresponding to said occurrence, said instance of the parent, each instance of one of the

3 first plurality of descendants, and each instance of one of the at least some of the second plurality
4 of descendants.

1 35. The method of claim 28, further comprising:
2 locating a second occurrence of the search term in either said first plurality of
3 descendants or said second plurality of descendants;
4 traversing the hierarchy from said second occurrence to an second instance of the parent
5 using at least one of the direct relationship and the indirect relationship;
6 traversing the hierarchy from said second instance of the parent to a second instance of
7 one of the first plurality of descendants using the direct relationship;
8 traversing the hierarchy from said second instance of one of the first plurality of
9 descendants to a second instance of one of the at least some of the second plurality of
10 descendants using the direct relationship therebetween; and
11 building a second context corresponding to said second occurrence, said second instance
12 of the parent, said second instance of one of the first plurality of descendants, and said second
13 instance of one of the at least some of the second plurality of descendants.

1 36. The method of claim 35, further comprising presenting said context and said
2 second context to a user.

1 37. A method for retrieving information from a database organized in a hierarchy
2 having a plurality of parents, a first plurality of descendants, and a second plurality of
3 descendants, each of the first plurality of descendants having direct relationships to at least one
4 of the plurality of parents, each of the second plurality of descendants having indirect
5 relationships to at least one of the plurality of parents, at least some of the second plurality of
6 descendants having second direct relationships to at least one of the first plurality of descendants,
7 the method comprising:
8 locating an occurrence of a search term in either one of the first plurality of descendants
9 or one of the second plurality of descendants;
10 traversing the hierarchy from said occurrence to an instance of one of the plurality of the
11 parents using at least one of the direct relationships or the indirect relationships;

traversing the hierarchy from said instance of one of the plurality of parents to an instance of one of the first plurality of descendants using the direct relationships;

traversing the hierarchy from said instance of one of the first plurality of descendants to an instance of one of the at least some of the second plurality of descendants using the second direct relationships;

locating a second occurrence of the search term in either one of the first plurality of descendants or one of the second plurality of descendants;

traversing the hierarchy from said second occurrence to an instance of a second one of the plurality of the parents using at least one of the direct relationships or the indirect relationships;

traversing the hierarchy from said instance of said second one of the plurality of parents to an instance of a second one of the first plurality of descendants using the direct relationships;

traversing the hierarchy from said instance of said second one of the first plurality of descendants to an instance of a second one of the at least some of the second plurality of descendants using the second direct relationships;

building a first context corresponding to said occurrence, said instance of one of the plurality of the parents, said instance of one of the first plurality of descendants, and said instance of one of the at least some of the second plurality of descendants; and

building a second context corresponding to said second occurrence, said instance of said second one of the plurality of the parents, said instance of said second one of the first plurality of descendants, and said instance of said second one of the at least some of the second plurality of descendants.

38. The method of claim 37, wherein each of said traversing the hierarchy comprises exhaustively traversing the hierarchy.